/	OIPE .				MA965		10/316,127			
	INFORMATION DISCLOSURE CITATION JUN 2 8 2004 py (19 seeveral sheets if necessary)					Applicant(1) Fraser et al.		19614,643		
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V	Ba-	BUR	9		U.S. PA	TENT DOCUMENTS				
*EXAMINER REF DOCUMENT NUMBER DATE					NAME	CLASS	SUBCLASS FILING DAT			
V	RITIAL			03/13/2001	Peters	Peterson et al.			7,371	Dy Risk V &
	5,035,708			07/20/1991	Alchas	et al.		·		
	5,372,945		12/13/1994	Alchas	Alchas et al.					
	5,786,207		07/28/1998	Katz e	t al.					
	4,820,626		04/11/1989	Willia	ns et al.					
			4,883,755	11/28/1989	Carab	asi et al.				
			5,486,359	01/23/1996	Caplar	et al.				
1			4,458,678	07/10/1984	Yanna	s et al.				
			5,837,235	11/17/1998	Mueller et al.					
			5,409,833	04/25/1995	Hu et al.					
6,316,247 11/13/2		11/13/2001	Katz e	t al.						
					FOREIGN PATENT DOCUMENTS					
		REF	OCUMENT NUMBER	DATE		COUNTRY	CLASS	SUBCLASS	YES	ation NO
	M	,	EP0570331	. 11/18/1993	Europe	:				
		1	WO8702812	07/11/1987	WIPO	·				
	1	·	WO8601111	02/27/1986	WIPO					
				<u>'</u>						
		•								
							ing Author, Title, De		ges, Etc.)	
	U.S. Application No. 09/936,665, filed 9/10/2001, Katz et al., Adipose-Derived Stem Cells and Lattices									
			U.S. Application No. 09	7/952,522, filed 9/	10/2001, 1	Catz et al., Adipose-Deri	ved Stem Cells an	o Lattices	···	
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B.	*	(Use several sheets if necessary)	Fraser et	el.	Group Art Upis
TYANING TO			tung	12/09/2002	3763
*EXAMINER INITIAL		OTHER DOCUMENTS (Including Author, Til	tle, Date, Perti	inent Pages, Etc.)	
136	/	Avital, I., D. Inderbitzin, et al. (2001). "Isolation, ci stem cells." Biochem Biophys Res Commun 288(1):	baracterizati : 156-64.	ion, and transplantation	on of bone marrow-derived hepatocyte
1		Carmeliet, P. and A. Luttun (2001). "The emerging Thromb Haemost 86(1): 289-97.	role of the t	bone marrow-derived	stem cells in (therapeutic) angiogenesis."
		Castro-Malaspina, H., W. Ebell, et al. (1984). "Hun Res 154: 209-36.	nan bone ma	arrow fibroblast colon	y-forming units (CFU-F)." Prog Clin Bio
		Coleman, S. R. (1995). "Long-term survival of fat to	ransplants: (controlled demonstrat	ions." Aesthetic Plast Surg 19(5): 421-5.
		Coleman, S. R. (2001). "Structural fat grafts: the id	leal filler?" (Clin Plast Surg 28(1):	111-9.
		Coleman, W. P., 3rd (1991). "Autologous fat transp	lantation." I	Plast Reconstr Surg 8	B(4): 736.
		Connolly, J. F. (1998). "Clinical use of marrow oste \$257-66.			
		Eremia, S. and N. Newman (2000). "Long-term followed at least 12 months after receiving the last of	of a minimun	m of two treatments."	Dermatol Surg 26(12): 1150-8.
		Fukuda, K. (2001). "Development of regenerative energineering." Artif Organs 25(3): 187-93.			·
		Guerreresantos, J., A. Genzalez-Mendeza, et al. (19 study in rats." Aesthetic Plast Surg 20(5): 403-8.	196). "Long-	term survival of free f	at grafts in muscle: an experimental
-		Horwitz, E. M., D. J. Prockop, et al. (1999). "Trans cells in children with estengenesis imperfects." Nat	Med 5(3): 3(09-13.	
	V	Horwitz, E. M., D. J. Prockop, et al. (2001). "Clinic ostcogenesis imperfecta." Blood 97(5): 1227-31.	al responses	to bone marrow trans	plantation in children with severe
EXAMINER		CAMERORA	DATE CONS		the second
		citation considered, whether or not citation is in conformat copy of this form with next communication to applicant.	ace with MPE	;P Section 609; Draw line	through citation if not in conformance and

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9 7004		Docket Number (Optional) MA9658P	Application Number
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& \$	(Use several sheets if necessary) .	Fraser et al.	Group Art Unit
March Barrens		12/09/2002	3763
*EXAMINER INITIAL	OTHER DOCUMENTS (Including Author, Tit	le, Date, Pertinent Pages, Etc.)	
134	Huang, J. I., S. R. Beanes, et al. (2002). "Rat extrar Plast Reconstr Surg 109(3): 1033-41; discussion 104	medullary adipose tissue as a source of 42-3.	osteachandrogenic progenitor ceils."
	Hutley, L. J., A. C. Herington, et al. (2001). "Huma J Physiol Endocrinol Metab 281(5): E1037-44.	n adipose tissue endothelial cells pron	note preadipocyte proliferation." Am
	Kern, P. A., A. Knedler, et al. (1983). "Isolation and Invest 71(6): 1822-9.	d culture of microvascular endothellu	m from human adipose tissue." J Clin
	Lee, J. H., Z. Ilic, et al. (1996). "Cell kinetics of rep. 77(2): 63-72.	air after allyl alcohol-induced liver ne	crosis in mice." Int J Exp Pathol
	Lee, P. E., R. C. Kung, et al. (2001). "Perinrethral a a randomized double-blind controlled trial." J Urol	autologous fat injection as treatment f 165(1): 153-8.	or female stress urinary incontinence:
	Mizuno, H., P. A. Zuk, et al. (2002). "Myogenic diff 109(1): 199-209; discussion 210-1.	erentiation by human processed lipoa	spirate cells." Plast Reconstr Surg
	Murayama, T., O. M. Tepper, et al. (2002). "Determ angiogenic growth factor-induced neovascularizatio	nination of bone marrow-derived ende n in vivo." Exp Hematol 30(8): 967-77	thelial progenitor cell significance in L
	Murry, C. E., R. W. Wiseman, et al. (1996). "Skelet: invest 98(11): 2512-23.	al myoblast transplantation for repair	of myocardial necrosis." J Clin
	Muschler, G. F., H. Nitto, et al. (2001). "Age- and ge prevalence of osteoblastic progenitors." J Orthop Re	ender-related changes in the cellularites 19(1): 117-25.	y of human bone marrow and the
	Nishimori, M., Y. Yamada, et al. (2002). "Health-rei 99(6): 1995-2001.	lated quality of life of unrelated bone	marrow denors in Japan." Blood
	Orlic, D., J. Kajstura, et al. (2001). "Transplanted a Acad Sci 938: 221-9; discussion 229-30.	duit bone marrow cells repair myocar	dial infarcts in mice." Ann N Y
	Orlic, D., J. Kajstura, et al. (2001). "Bone marrow c	ells regenerate infarcted myocardium	." Nature 410(6829): 701-5.
EXAMINER	LANGEORO	DATE CONSIDERED LE	2/5
	f citation considered, whether or not citation is in conforman a copy of this form with next communication to applicant.	ce with MPEP Section 609; Draw line thr	ough citation if not in conformance and

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me	I (I be several charts (accessors)	Fraser et al.	·				
TART A TRADE	all	Filing Date 12/09/2002	Group Art Unit 3763				
*EXAMINER	OTHER DOCUMENTS (Including Author, 7)						
INITIAL			Insentingues " 1 Endought 11(1), 67 70				
60	Palma, P. C., C. L. Riccetto, et al. (1997). "Repeat						
	Pittenger, M. F., A. M. Mackay, et al. (1999). "Mu 284(5411): 143-7.	altilineage potential of adult human	ı mesenchymal stem cells." Science				
	Prockop, D. J., S. A. Azizi, et al. (2000). "Potential use of marrow stromal cells as therapeutic vectors for diseases of the central nervous system." Prog Brain Res 128: 293-7.						
	Rajnoch, C., J. C. Chachques, et al. (2001). "Cellu 121(5): 871-8. t&artType-abs&id-al 12937&targe	lar therapy reverses myocardial dy	rsfunction." J Thorac Cardiovase Surg				
	Shi, Q., S. Rafil, et al. (1998). "Evidence for circul-	ating bone marrow-derived endoth	elial cells." Blood 92(2): 362-7.				
	Strauer, B. E., M. Brehm, et al. (2002). "Repair of marrow cell transplantation in humans." Circulati	infarcted myocardium by autologo ion 106(15): 1913-8.	ous intracoronary mononuclear bone				
·	Takshashi, T., C. Kalka, et al. (1999). "Ischemia-a progeniter cells for neovascularization." Nat Med	and cytokine-induced mobilization (5(4): 434-8.	of bone marrow-derived endothelial				
, .	Thomas, E. D. (1994). "Stem Cell Transplantation	: Past, Present and Future." Stem (Cells 12: 539-544.				
	Werlich, T., K. J. Stiller, et al. (1999). "Experimen Pathol 51(1): 93-8.	atal studies on the stem cell concept	of liver regeneration. IL." Exp Toxicol				
	Yavorkovsky, L., E. Lai, et al. (1995). "Participation periportal necrosis induced by allyl alcohol." Hepa	atology 11(6): 1702-12.					
	Yin, L., D. Lynch, et al. (1999). "Participation of dinjury induced by allyl alcohol." J Hepatol 31(3): 4						
V	Zuk, P. A., M. Zhu, et al. (2001). "Multillneage cel Eng 7(2): 211-28.	lls from human adipose tissue: impl	lications for cell- based theraples." Tissue				
Examiner	LANKSORO		12/12/5				
*EXAMINER: In	altial if citation considered, whether or not citation is in conforma	ance with MPEP Section 609; Draw lin	is through citation if not in conformance and				

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····	<u></u>	U.S. P/	TENT DOCUMENT	3				
EXAMINER INITIAL	DOCUMENT NO.	DATE	NAME	CLASS	SUBCLASS		G DATE ROPRIATE	
be	5,486,359	January 23, 1996 (EXHIBIT 1)	Caplan, et al.					
.	5,728,739	March 17, 1998 (EXHIBIT 2)	Ailhaud et al.					
	5.827,740	October 27, 1998 (EXHIBIT 3)	Pittenger			-		
	5,827,897	October 27, 1998 (EXHIBIT 4)	Ailhaud, et al.		·			
		FOREIGN	PATENT DOCUME	NTS				
	DOCUMENT NO.	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION		
13V		•				YES	NO	
1	WO 98/04682	February 5, 1998 (EXHIBIT 5)	US					
	OTHE	R DOCUMENTS (Includ	ing Author, Title, Date	e, Pertinent Pag	es, Etc.)			
UBV	Ameri	line, et al., "Paracrine st can Journal of Physiolog	2 1996 270(5) E895	-E899 (EXHIB	IT 6)			
1 .	1279.	et al., "Differentiation of 1285 (EXHIBIT 7)						
	Enten	mann, et al., "Relationsh sor cells," <i>American Ph</i>	ip between replications	n and differentia	ation cultured hu HIBIT 8)	man adipo	cyte	
-	Eslam	i Varzaneh, et al., "Extra	cellular Matrix Com	ponents Secrete	d by Microvascu	lar Endoù	elial Cells	
	Stimu	late Preadipocyte Difference, et al., "Endothelin-1 I	entiation in Vitro," M	letabolism 1994	43 (7), 906-912	(EXHIBI	T 9)	
	Precu	rsor Cells." Metabolism	1994 43(2) pp 227-23	32 (EXHIBIT 1	0)			
1	Haust	pan et al. "The Influence	e of Extracellular Ma	atrix Substrata o	n Preadipocyte I	evelopme	at ia	
	Serun	Free Cultures of Strom ing et al., "Increased exp	al-Vascular Cells," J.	Anim.Sci. 1996	74(9), 2117-217	erminal	BII II)	
	differ (EXH	ratiation to adipocytes,"	American Physiologi	ical Society 199.	3 265(6), C1729.	C1735		
	. Marke	o, et al., "Isolation of a P	995 136(10), 4582-4	588 (EXHIBIT	13)			
	1996	beer, et al., "A novel me 20(Supp. 3), S77-S83 (E	XHIBIT 14)					
	Cell S	ry et al., "From preadipo turface to the Nucleus," (UBIT 15)	cyte to Adipocyte: D Critical Review in Cl	ritterentiation-Di linical Laborator	rected Signals of Sciences 1999	1 LASUILA (1 36(1), 1-3	om ine 4	

DATE CONSIDERED XAMINER ZAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; draw line through citation if not in conformance and not considered. Include copy of this form for next communication to the Applicant.

*Substitute Disclosure Statement Form (PTO-1449) Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

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FORM 1449* A	Docket Number MA9658P	Application Number
IN AN APPLICATION	Applicant Fraser et al.	
(Use several sheets if necessary)	Filing Date 12/09/2002	Group Art Unit 3763

	OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)
100	Vassaux, et al., "Proliferation and differentiation of Rat Adipose Precursor Cells in Chemically Defined Medium: Differential Action of Anti-Adipogenic Agents," Journal of Cellular Physiology 1994 161(2), 249-256 (EXHIBIT 16)
	Wabitsch, et al., "Biological Effects of Human Growth Hormone in Rat Adipocyte Precursor Cells and Newly Differentiated Adipocytes in primary Culture," <i>Metabolism</i> 1996 Vol 45, No. 1 pp34-42 (EXHIBIT 17)
	Young et al., "Mesenchymal Stem Cells Reside Within the Connective Tissues of Many Organs," Developmental Dynamics 1995 202(2), 137-144 (EXHIBIT 18)
`	
	·
	·
· ————	

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; draw time through citation if not in conformance and not considered. Include copy of this form for next communication to the Applicant.

'Substitute Disclosure Statement Form (PTO-1449) Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE XAMINER DATE CONSIDERED

Application Number **Docket Number** MA9658P 100116777 Applicant ORMATION DISCLOSURE STATEMENT Fraser et al. IN AN APPLICATION Group Art Unit Filing Date 3763 12/09/2002 (Use several sheets if necessary)

		U.S. P/	ATENT DOCUMENTS				
EXAMINER INITIAL	DOCUMENT NO.	DATE	NAME	CLASS	SUBCLASS	FILING IF APPRO	
bu	5,591,625 (Exhibit 19)	January 7, 1997	Gerson, et al.		·		
	5,786,207 (Exhibit 20)	July 28, 1998	Katz, et al.				
	5,827,735 (Exhibit 21)	October 27, 1998	Young, et al.				
	5,827,740 (Exhibit 22)	October 27, 1998	Pittenger				
	5,906,934 (Exhibit 23)	May 25, 1999	Grande, et al.				
	5,908,784 (Exhibit 24)	June 1, 1999	Johnstone et al.	·			•
\mathcal{J}	6,200,606 B1 (Exhibit 25)	March 13, 2001	Peterson, et al.				
		FOREIGN	PATENT DOCUMEN	ITS		· · · · · · · · · · · · · · · · · · ·	
	DOCUMENT NO.	DATE	COUNTRY	CLASS	SUBCLASS	TRANSI	
					<u> </u>	YES	NO
		R DOCUMENTS (Include					
	99(Pt	ett, JH, et al., 1991 <i>J. Cel</i> 1):131-139 (Exhibit 26) ford, et al., 1986 <i>Endo.</i> "	1 25. Dihydroxyvitar	nin D. and Hun	nan Bone-Derive	d Cells in V	itro:
	Effect Bjorn: News	s on Alkaline Phosphata son, et al., 1999 <i>Science</i> 1 Stem Cells in Vivo * 2	se, Type I Collagen a "Turning Brain into I R3:534-537 (Exhibit	nd Proliferation Blood: A Herma 28)	topoetic Fate Ad	opted by Ad	ult
	Neural Stem Cells in Vivo," 283:534-537 (Exhibit 28) Bruder, et al., 1997 J. Cell Biochem. "Growth Kinetics, Self-Renewal, and the Osteogenic Potential of Purified Human Mesenchymal Stem Cells During Extensive Subcultivation and Following						
	Cryopreservation," 64:278-294 (Exhibit 29) Butler-Browne, et al., 1990 Anat. Embryol. (Berl) "Myosin heavy and light chain expression during human skeletal muscle development and precocious muscle maturation induced by thyroid hormone," 181:513-522 (Exhibit 30)						
1	Chan	S-L., et al., 1994 Endo Induction of the Osteob	"Differentiation of H last Phenotype by De	uman Bone Ma xamethasone,"	ггоw Osteogenic 134: <u>277-286 (Е</u>	Stromal Ce zhibit 31)	ils in

DATE CONSIDERED EXAMINER CAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; draw line through citation if not in Informance and not considered. Include copy of this form for next communication to the Applicant.

*Substitute Disclosure Statement Form (PTO-1449) Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

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FORM 1449* [7]	Oocket Number MA9658P	Application Number
IN AN APPLICATION	Applicant Fraser et al.	
(Use several sheets if necessary)	Filing Date 12/09/2002	Group Art Unit 3763

	OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)
10.	Chyun, et al., 1984 Endo. "Cortisol Decreases Bone Formation by Inhibiting Periosteal Cell
1004	Proliferation," 114:477-480 (Exhibit 32)
	Conget, PA and JJ Minguell 1999 J. Cell. Physiol "Phenotypical and Functional Properties of Human
1 / 1	Bone Marrow Mesenchymal Progenitor Cells," 181:67-73 (Exhibit 33)
	Cooper, et al., 1999 J. Endocrinol. "Glucocorticoid activity, inactivity and the osteoblast,"
1 1 1	163:159-164 (Exhibit 34)
	Deaker, A.E., et al., 1995 Differentiation "Formation of cartilage-like spheroids by micromass cultures
	of murine C3H101/2 cells upon treatment with transforming growth factor-\$1," 59: 25-34 (Exhibit 35)
	Deaker, et al., 1999 Differentiation "Chondrogenic differentiation of murine C3H10T1/2 multipotential
	mesenchymal cells: I. Stimulation by bone morphogenetic protein-2 in high-density micromass
	cultures," 64:67-76 (Exhibit 36)
	Dineri, et, al., 1995 Proc. Natl. Acad. Sci. USA "A biomarker that identifies a senescent human cells in
	culture and in aging skin in vivo," 92: 9363-9367 (Exhibit 37)
	Ducy, et, al., 1997 Cell "Osf2/Cbfs 1: A Transcriptional Activator of Osteoblast Differentiation," 89:747-
	754 (Exhibit 38)
	Ferrari G., et al., 1998 Science "Muscle Regeneration by Bone Marrow-Derived Myogenic Progenitors," 279: 1528-1530 (Exhibit 39)
	Frederikson and McKay 1988 J. Neurosci. "Proliferation and Differentiation of Rat Neuroepithelial
	Precursor Cells in vivo," 8:1144-1151 (Exhibit 40)
	Fridman, et al., 1992 Int. J. Cancer "Malignant Transformation of NIH-3T3 Cells After Subcutaneous co-
	Injection With A Reconstituted Basement Membrane (Matrigel)," 51(5), 740-44 (Exhibit 41)
	Grigoradis A., et al., 1988 J. Cell Biol. "Differentiation of Muscle, Fat, Cartilage, and Bone from
	Progenitor Cells Present in a Bone-derived Clonal Cell Population: Effect of Dexamethasone," 106: 2139-2151(Exhibit 42)
	Guerriero, V and JR Florini 1980 Endocrinology "Dexamethasone Effects on Myoblast Proliferation and differentiation," 106:1198-1202(Exhibit 43)
	Hall, BK 1981 "Intracellular and extracellular control of differentiation of cartilage and bone," Histochem. J. 13:599-614(Exhibit 44)
	Jaiswal, et al., 1997 "Osteogenic Differentiation of Purified, Culture-Expanded Human Mesenchymal Stem Cells In Vitro," J. Cell Biochem. 64:295-312(Exhibit 45)
·	Johnstone B., et al., 1998 "In Vitro Chondrogenesis of Bone Marrow-Derived Mesenchymal Progenitor Cells," Exp. Cell Res. 238: 265-272 (Exhibit 46)
 	Kania, et al., 1990 "The Drosophila segmentation gene runt encodes a novel nuclear regulatory protein
	that is also expressed in the developing nervous system," Genes Dev. 4:1701-1713(Exhibit 47)
	Kehlen, A. et al., 2000 J. Cell Biochem. "Increased Lymphocytic Aminopeptidase N/CD13 Promoter
	Activity After Cell-Cells Contact," 80:115-123(Exhibit 48)
	Kosher, RA, et al., 1986 J. Cell Biol. "Collagen Gene Expression During Limb Cartilage
	Differentiation," 102:1151-1156(Exhibit 49)
	Kuri-Harcuch, W. et al., 1984, Differentiation "Extracellular matrix production by mouse 3T3-F442A cells during adipose differentiation in culture," 28(Exhibit 50)
	Lanier, L.L. et al, 1991 J. Immunol. "Molecular and Functional Analysis of Human Natural Killer Cell-
/	Associated Neural Cells Adhesion Molecule (N-Cam/CD56), "146:4421-4426(Exhibit 51)
4 - /	Lawson-Smith, M.J. and McGeachie, J.K. 1998 J. Anat. "The identification of myogenic cells in
W	skeletal muscle, with emphasis on the use of tritiated thymidine autoradiography and desmin antibodies," 192:161-171 (Exhibit 52)

XAMINER	UNI DOLD	DATE CONSIDERED		12/5	
EXAMINER: Initial if n	eference considered, whether or not citation	on is in conformance with MPEP	609; draw	line through ci	ation if not in
conformance and not	considered. Include copy of this form for	next communication to the Appli	cant.		:

Substitute Disclosure Statement Form (PTO-1449) Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

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3. FORM 1449" []	Docket Number	Application Number
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INFORMATION DISCLOSURE STATEMENT	Applicant	
IN AN APPLICATION	· Fraser et al.	•
	Filing Date	Group Art Unit
(Use several sheets if necessary)	12/09/2002	3763

	OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)
1	
120	Leboy, et al., 1991 J. Cell Physiol. "Dexamethasone Induction of Osteoblast mRNAs in Rat Marrow Stromal Cell Cultures," 146:370-378 (Exhibit 53)
	Lendahl, et al., 1990 Cell "CNS-Stem Cells Express a New Class of Intermediate Filament Protein," 60:585-595 (Exhibit 54)
	Lenoir, N. 2000 Science "Europe Confronts The Embryonic Stem Cell Research Challenge," 287:1425-1427 (Exhibit 55)
	Lumelsky, N., et al. 2001 Science "Differentiation of Embryonic Stem Cells to Insulin-Secreting Structures Similar to Pancreatic Islets," 292:1389-1394. (Exhibit 56)
	Lynch, et al., 1995, Exp. Cell Res. "The influence of Type I Collagen on the Development and
1 1	Maintenance of the Osteoblast Phenotype in Primary and Passaged Rat Calvarial Osteoblasts:
	Modification of Expression of Genes Supporting Cell Growth, Adhesion, and Extracelluar Matrix Mineralization," 216:35-45 (Exhibit 57)
1	Malaval, et al., 1994 J. Cell. Physiol. "Cellular Expression of Bone-Related Proteins During In Vitro Ostegenesis in Rat Bone Marrow Stromal Cell Culture," 158:555-572 (Exhibit 58)
	Manduca, et al., 1992 Eur. J. Cell Biol. "Chondrogenic differentiation in chick embryo osteoblast cultures," 57:193-201 (Exhibit 59)
	Martin, et al., 1999 Exp. Cell Res. "Mammalian Chondrocytes Expanded in the Presence of Fibroblast Growth Factor 2 Maintain the Ability to Differentiate and Regenerate Three-Dimensional Cartilaginous Tissue," 253:681-688 (Exhibit 60)
	Megeney, et al., 1996 Genes Dev. "MyoD is required for myogenic stem cell function in adult skeletal muscle," 10:1173-1183 (Exhibit 61)
	Molkentin and Olson 1996 Curr. Opin. Genet. Dev. "Defining the regulatory networks for muscle development," 6:445-453 (Exhibit 62)
	Mundlos, et al., 1997 Cell "Mutations Involving the Transcription Factor CBFA12 Cause Cleidocranial Dysplasia," 89:773-779 (Exhibit 63)
	Nehls, A. and D Drenckhahn 1991 J. Cell Biol. "Heterogeneity of Microvascular Pericytes for Smooth Muscle Type Alpha-Actin," 113:147-154 (Exhibit 64)
	Owen, TA, et al., 1990 J. Cell Physiol. "Progressive Development of the Rat Osteoblast Phenotype in Vitro: Reciprocal Relationships in Expression of Genes Associated with Osteoblast Proliferation and Differentiation During Formation of the Bone Extracellular Matrix," 143:420-430 (Exhibit 65)
	Paul S.R., et al., 1991 Blood "Stromal Cell-Associated Hernatopoiesis: Immortalization and Characterization of Primate Bone Marrow-Derived Stromal Cell Line," 77: 1723-33 (Exhibit 66)
	Pittenger M.F., et al., 1999 Science "Multilineage Potential of Adult Human Mesenchymal Stem Cells," 284: 143-147 (Exhibit 67)
	Prockop D.J. 1997 Science "Marrow Stromal Cells as Stem Cells for Nonhematopoietic Tissues," 276: 71-74 (Exhibit 68)
	Rando, et al., 1995 Exp. Cell Res. "The Fate of Myoblasts Following Transportation into Mature Muscle," 220:383-389 (Exhibit 69)
	Saalbach, A., et al., 1997 Cell and Tiss. Res. "The Fibroblast-specific MAb ASO2: a novel tool for detection and elimination of human fibroblasts," 290:593-599 (Exhibit 70)
#	Sanchez-Ramos, et al., 2000 "Adult Bone Marrow Stromal Cells Differentiate into Neural Cells in Vitro," Exp. Neurol. 164:247-256 (Exhibit 71)
	Seale and Rudnicki 2000 Dev. Biol. "A New Look at the Origin, Function, and "Stem-Cell" Status of Muscle Satellite Cells," 218:115-124 (Exhibit 72)
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EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; draw line through citation if not in conformance and not considered, lpetide copy of this form for next communication to the Applicant.

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TRADELE INFORMATION DISCLOSURE STATEMENT	Applicant	
IN AN APPLICATION	Fraser et al.	
	. Filing Date	Group Art Unit
(Use several sheets if necessary)	12/09/2002	3763

	OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)
lb	Shukunami, C., et al., 1998 Exp. Cell Res. "Sequential Progression of the Differentiation Program by Bone Morphogenetic Protein-2 in Chondrogenic Cell Line ATDCS," 241:1-11 (Exhibit 73)
1	Shukunami C., et. al., 1996 Journ. Of Cell Bio. "Chrondrogenic Differentiation of Clonal Mouse Embryonic Cell Line ATDC5 In Vitro: Differentiation-dependent Gene Expression of Parathyroid Hormone (PTH)/PTH-related Peptide Receptor," 133:2:457-468 (Exhibit 74)
	Silberstein, L., et al., 1986 Cell "Developmental Progression of Myosin Gene Expression in Cultured Muscle Cells," 46:1075-1081 (Exhibit 75)
	Suga, S., et al., 1996, "Eur. J. Cell Biol. "Intracellular localization of antigens recognized by anti- vimentin monoclonal antibodies (mAbs): Cross-reactivities of anti-vimentin mAbs with other cellular components 70:84-91 (Exhibit 76)
	Tacchetti, C, et al., 1992 Exp Cell Res. "Cell Condensation in Chondrogenic Differentiation," 200:26-33 (Exhibit 77)
	Tapscott, et al., 1988 Science "MyoD1: A Nuclear Phosphoprotein Requiring a Myc Homology Region to Convert Fibroblasts to Myoblasts," 242:405-411 (Exhibit 78)
	Thornell, et al., 1984 J. Neurol. Sci. "Development of Fiber Types in Human Fetal Muscle," 66:107-115 (Exhibit 79)
	Totonoz, et al., 1995 Mucl: Acid Res "mPPARy2: tissue-specific regulator of an adipocyte enhancer," (Exhibit 80)
	Tsonis and Goetinck 1990 Exp. Cell Res. "Cell Density Dependent Effect of a Turnor Promoter on Proliferation and Chondrogenesis of Limb Bud Mesenchymal Cells," 190:247-253 (Exhibit 81)
	von der Mark, et al., 1977 Nature "Relationship between cell shape and type of collagen synthesised as chondrocytes lose their cartilage phenotype in culture," 267:531-532 (Exhibit 82)
	Vulcicevic et al., 1992 Exp. Cell Res "Identification of Multiple Active Growth factors in Basement Membrane Matrigel Suggests Caution in Interpretation of Cellular Activity Related to Extracellular Matrix Components,", 202(1), 1-8 (Exhibit 83)
	Weintraub, et al., 1991 Science "The myoD Gene Family: Nodal Point During Specification of the Muscle Cell Lineage," 251:761-766 (Exhibit 84)
	Woodbury, et al., 2000 J. Neurosci. Res. Science "Adult Rat and Human Bone Marrow Stromal cells Differentiate Into Neurons," 61:364-370 (Exhibit 85)
	Young, 2000 Science "A Time for Restraint," 287:1424. (Exhibit 86)
	Zalin, RJ 1987 Exp. Cell Res. "The Role of Hormones and Prostanoids in the in Vitro Proliferation and differentiation of Human Myoblasts," 172:265-281. (Exhibit 87)
<u> </u>	
	·
	2

XAMINER DATE CONSIDERED EXAMINER: Initial if reference considered, whether or noticitation is in conformance with MPEP 609; draw line through citation if not in conformance and not considered. Include copy of this form for next communication to the Applicant.

*Substitute Disclosure Statement Form (PTO-1448) Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

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FORM 1449°	Oocket Number MA9658P	Application Number
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		U.S. PA	TENT DOCUMENTS			
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	L	FOREIGN	PATENT DOCUMEN	TS	4	
	DOCUMENT NO.	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION
						YES NO
11	OTHE	R DOCUMENTS (Includ	ing Author, Title, Date	. Pertinent Page	es, Etc.)	
150	Ankro	m, Michael A., "Age-rel lasts," Biochem J. 333:7	ated changes in huma 87-794 (Exhibit 88)	n oestrogen rec	eptor function a	nd levels in
	Aso, I Nones 213:30	lisashi, et al., "A Preadip pression of GLUT-4 pro 69-375. (Exhibit 89)	pocyte Clonal Line fro tein during Adipocyte	Differentiation	ı," Biochem. Bio	phys. Res. Commun.
	Mouse	ohr, David A. et al., "Tiss Adipocytes," <i>Biochem</i> .	Biophys. Res. Comun	. 1985 132:850	-855. (Exhibit 9	0)
	Cheife	etz, S. et al., "Endoglin Is n Endothelial Cells," J. I	a Component of the	Transforming G	irowth Factor-8	Receptor System in
1	Chen,	Theresa L. et al., "10,25 J. Chem. 1983 258:4350	-Dihydroxyvitamin D -4355. (Exhibit 92)	Receptors in C	Cultured Rat oste	
1	Enom J. Bio.	oto, Hirayuki et al., "Cbf I. Chem. 2000 275:8695-	al Is a Positive Regula 8702. (Exhibit 93)			
	Herma Acting	an, Ira M. and Patricia D'	'Amore, "Microvascu L:43-52. (Exhibit 94)			•
	Lucas 17E:1	, Paul A. et al., "Mesenci 22, R212 (Exhibit 95)	bymal Stem Cells Fro	•		
	Majes	ka, Robert J. and Gideon blastic Osteosarcoma Ce	A. Rodan, "The Effe Ils." J. Biol. Chem. 19	ct of 1,25(OH) ₂ 82 257:3362-3	D ₂ on Alkaline I 365. (Exhibit 96	Phosphates in
	Perias	amy, Muthu et al., "Regi trophy," <i>Biochem. J.</i> 198	ulation of myosin hear	ry-chain gene e	xpression during	sleletal-muscle
	Poliar	d, a. et al., "Controlled Conic, Chondrogenic, or	conversion of an Imme	ortalized Mesod	lermal progenito 995 130;1461-1	r Cell Towards 472. (Exhibit 98)
	Price, is Ass (Exh)	Paul A. et al., "Matrix G ociated With The Organi bit 99)	LA Protein, A New 7 ic Matrix of Bone," B	Carboxyglutan Iochem. Biophy	nic Acid-Contair rs. Res. Commun	ning Protein Which ., 1983 117:765-771.
	Rando	o, Thomas A. and Helen I	uted Gene Therapy." J	Cell Biol 1994	125:1275-1287	(Exhibit 100)
	/ Wein	er, Francis R. et al., "Regrentiation and Tumorated	caltion of collagen G	ene Expression	in 3T3-L1 Cells	Efects of Adipocyte
EYAMINED		0 ///	DATE CONS		12/1	

EXAMINER: Initial if reference considered whether or not citation is in conformance with MPEP 609; draw line through citation if not in conformance and not considered. Include copy of this form for next communication to the Applicant.

*Substitute Disclosure Statement Form (PTO-1449) Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

Sheet12of 21 **Application Number Docket Number** MA9658P 19316,127 INFORMATION DISCLOSURE STATEMENT **Applicant** IN AN APPLICATION Fraser et al. Filing Date Group Art Unit (Use several sheets if necessary) 3763

12/09/2002

BL	Williams, Irene H. and S. Esthimios Polakis, "Differentiation of 3T3-L1 Fibroblasts to Adipocytes The Effect Of Indomethacin, Prostaglandin E, And Cyclic AMP On The Process of Differentiation,"
	Biochem. Biophys. Res. Commun. 1977 77:175-186. (Exhibit 102)
	Wise, Leigh S. and Howard Green, "Participation of One Isozyme of Cytosolic Glycerophosphate Dehydrogenase in the Adipose Conversion of 3T3 Cells," J. Biol. Chem. 1979 254:273-275. (Exhibit 103)
	Yoon, Kyonggeun et al., "Characterization of the Rat osteocalcin Gene: Stimulation of Promoter Activity by 1,25-Dihydroxyvitamin D ₂ ," Biochem. 1988 27:8521-8526. (Exhibit 104)
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FORM 1449*

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	U.S.	PATENT DOCUMENTS	5		
DOCUMENT NO.	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
5.226.914 (Exhibit 105)	07/13/93	Caplan et al.			11/16/90
	04/07/98	Bruder et al.			01/24/95
	09/22/98	Caplan et al.			04/11/95
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1		Inhastone et al.			11/15/96
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		FOREIGN PA	TENT DOCUMEN	TS			
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	W098/20731 (Exhibit 114)	05/22/98	PCT	<u> </u>			X
	W098/32333 (Exhibit 115)	07/30/98	PCT		-		X
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A	WO99/11789 (Exhibit 119)	U3/11/35	'0'	<u> </u>		<u> </u>	<u> </u>

OTHER DOCUMENTS (Including Author, Tide, Date, Pertinent Pages, Etc.)
Bastard, J. P. et al., "A Mini-Liposuction Technique Adapted to the Study of Human Adipocyte Glucose
Transport System," Olabetologia, 36(Suppl. 1):A135, 1993 (Exhibit 120) Caplan, Arnold I., "The Mesengenic Process," Clinics in Plastic Surgery, 21:429-35, 1994 (Exhibit 121)
Captan, Arnold I., "The Mesengenic Process," Carries in Parsic Surgery, 21,323-35, 1554 (22,11)
Crandall, David L. et al., "Identification of Estrogen Receptor β RNA in Human Breast and Abdominal Subcutaneous Adipose Tissue," <i>Biochemical and Biophysical Research Communications</i> , 248:523-6, 1998 (Exhibit 122)
DATE CONSIDERED 12/17/
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Sheet 4 of 1 Application Number **Docket Number** -10/310,127 65 MA9658P Applicant INFORMATION DISCLOSURE STATEMENT Fraser et al. IN AN APPLICATION Group Art Unit Filing Date 3763 12/09/2002 (Use several sheets if necessary)

	· .	OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)
(B)	4	Hauner, Hans et al., "Promoting Effect of Glucocorticoids on the Differentiation of Human Adipocyte Precursor Cells Cultured in a Chemically Defined Medium," Journal of Clinical Investigation, 84:1663-70, 1989 (Exhibit 123)
4,	1	Hauner H. et al., "Glucocorticolds and Insulin Promote the Differentiation of Human Adipocyte Precursor Colle into Eat Cells." Journal of Clinical Endocrinology and Metabolism, 64:832-5, 1987 (Exhibit 124)
	11	Johnson, P. R. et al., "Uncontrolled edipocyte proliferation is not the primary tesion in the genetically- obese Zucker rat," International Journal of Obesity, 5:563-70, 1981 (Exhibit 125)
		Killinger, D. W. et al., "Influence of Adipose Tissue Distribution on the Biological Activity of Androgens," Annals New York Academy of Sciences, 595:199-211, 1990 (Exhibit 126)
		Killinger, Donald W. et al., 'The Relationship Between Aromatase Activity and Body Fat Distribution,' Stepping 50-61-72 1987 (Fability 127)
	·	Latentan, M. et al., "Réflexions sur une nouvelle approche de chirurgle plastique réparatrice: la réimplantation de fragments de tissu adipeux prélevés par liposuccion," Ann. Chur. Plast. Esthet., 34:77-
		Lam, Anson and Ronald Moy, "The Potential for Fat Transplantation," J. Dermatol. Surg. Oncol., 18:432-
		Lecoeur, L. and J. P. Ouhayoun, "In vitro induction of osteogenic differentiation from non-osteogenic message than a series and a series and series are series and series and series are series and series and series are series and series are series and series and series are series are series and series are series and series are series are series are series and series are series are series are series are series and series are series are series are series are series are series and series are se
		Loncar, D., "Ultrastructural analysis of differentiation of rat endoderm in vitro. Adipose vascular-strômal cells induce endoderm differentiation, which in turn induces differentiation of the vascular-stromal cells into chondrocytes," J. Submicrosc. Cytol. Pathol., 24:509-19, 1992 (Exhibit 131)
		Novakofski, Jan E., "Primary Cett Culture of Adipose Tissue," Biology of the Adipocyte: Research Approaches, Van Nostrand Reinhold Company, NY, 1987 160-97 (Exhibit 132)
		Pedersen, S. B. et al., "Identification of oestrogen receptors and oestrogen receptor mRNA in human adjoins the supplier of Clinical Investigation, 26:262-9, 1996 (Exhibit 133)
		Pettersson, Per et al., "Adipocyte Precursor Cells in Obese and Nonobese Humans," Metabolism, 34:808-12, 1985 (Exhibit 134)
		Ramsay, T. G. et al., *Pre-Adipocyte Proliferation and Differentiation in Response to Hormone Supplementation of Decanitated Fetal Pio Sera.* <i>J. Anim. Sci.</i> , 84:735-44, 1987 (Exhibit 135)
		Rubens, F. D. et al., "Tissue Factor Expression by Cells Used for Sodding of Prosthetic Vascular Grans, Invested for Supplied Research, 72:22-8, 1997 (Exhibit 138)
		Smahel, J., "Aspiration lipectorny and adipose tissue injection: pathophysiologic commentary," European to use of Plastic Surpey, 14:126-31, 1991 (Exhibit 137)
	1	Springhorn, Jeremy P. et al., "Human Capillary Endothelial Cells from Abdominal Wall Adipose 118808: Isolation Using an Anti-Pecam Antibody," In Vitro Cellular & Developmental Biology-Animal, 31:473-81, 1895 (Exhibit 138)
1	V	Tavassoli, Mehdi, "In Vivo Development of Adipose Tissue Following Implantation of Lipid-Depleted Cuttured Adiposeds " Experimental Cell Research, 137:55-62, 1982 (Exhibit 139)
1		Williams, John T. et al., "Cells Isolated from Adult Human Skeletal Muscle Capable of Differentiating into Multiple Mesedermal Phenotypes." The American Surgeon, 65:22-6, 1999 (Exhibit 140)
1		

EXAMINER

DATE CONSIDERED

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; draw line through citation if not in conformance and not considered. Include copy of this form for next communication to the Applicant.

Substitute Disclosure Statement Form (PTO-1849)

Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

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Docket Number MA9658P Application Number MA9658P Application Number MA9658P Applicant Fraser et al.

(Use several sheets if necessary)

Sheet Is of 21

Docket Number MA9658P Application Number MA9658P TOTAL STATEMENT MA9658P TOTAL

OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.) Williams, Stuart K. et al., "Liposuction-derived human fat used for vascular graft sodding contains endothelial cells and not mesothelial cells as the major cell type," Journal of Vascular Surgery, 19:916-23, 1994 (Exhibit 141)
endothelial cells and not mesothelial cells as the major cell type." Journal or Vascular Surgery, 19:910-25,
Wiodarski, Krzysztof H., "Section III. Basic Science and Pathology. Properties and Origin of Osteoblasts," Clinical Orthopaedics and Related Research, 252:276-93, 1990 (Exhibit 142)
Ahrens, Patricia Buckley et al., "Stage-Related Capacity for Limb Chondrogenesis in Cell Culture," Operation and Prince 1977, 60:69-82 (Exhibit 143)
Alameddine, Hala S. et al., "Regeneration of Skeletal Muscle Fibers from Autologous Satellite Cells Multiplied in Vitro. An Experimental Model for Testing Cultured Cell Myogenicity," Muscle & Nerve, 1989. 12:544.55 (Exhibit 144)
Angels, P. et al., "Engineering of Osteochondral Tissue with Bone Marrow Mesenchymal Progenitor Cells in a Derivatized Hyaturonan-Gelatin Composite Sponge," Tissue Engineering, 1999, 5:545-53
Bailey, A. J. et al., "Age-Related Changes in the Biochemical Properties of Human Cancellous Bone Colleges: Relationship to Bone Strength," Calcified Tissue International, 1999, 65:203-10 (Exhibit 146)
Barghorn, A. et al., "a-Smooth Muscle Actin Distribution in the Pulmonary Vasculature Comparing Hypoplastic and Normal Fetal Lungs," Pediatric Pathology & Laboratory Medicine, 1998, 18:5-22
Baytink, David J., "Glucocorticold-Induced Osteoporosis," The New England Journal of Medicine, 1983,
Becerra, José et al., "Demineralized Bone Matrix Mediates Differentiation of Bone Marrow Stromal Cells In Vitro: Effect of Age of Cell Donor," Journal of Bone and Mineral Research, 1996, 11:1703-14
Beiser, Ian H. and Irvin O. Kanat, "Subchondral Bone Drilling: A Treatment for Cartiage Defects," Journal
Breen, Ellen C. et al., "TGFp Alters Growth and Differentiation Related Gene Expression in Progressing Osteoblasts in Vitro, Preventing Development of the Mature Bone Phenotype," Journal of Cellular Osteoblasts in Vitro, Preventing Development of the Mature Bone Phenotype," Journal of Cellular
Bruder, Scott P. et al., "Bone Regeneration by Implantation of Punied, Culture-Expanded Human Macrophysial Storm Cells," Journal of Orthogondic Research, 1998, 18:155-62 (Exhibit 152)
Buthariu-Ephrat, Miriam et al., "Resurfacing of Goal Articular Cartilage by Chondrocytes Derived Profit
Campion, Dennis R., "The Muscle Satellite Celt: A Review," Internationals Review of Cytology, 1964,
Caplan, Arnold I., "Mesenchymal Stem Cells," Journal of Orthopaedic Research, 1991, 9:641-50
Captan, Arnold I., "The Mesengenic Process," Clinics in Plastic Surgery, 1994, 21:429-35 (Exhibit 158)
Carranza-Bencano, A. et al., "Comparative Study of the Reconstruction of Articular Cartilage Defects with Free Costal Perichondrial Grafts and Free Tibial Periosteal Grafts: An Experimental Study on Rabbits," Obligified Tissue Informational, 1999, 65:402-7 (Exhibit 157)
EXAMINER DATE CONSIDERED 1/12/5
EXAMINER: Initiat II reference considered whether or not citation is in conformance with MPEP 609; draw line through citation if not in
conformance and not considered. Include copy of this form for next communication to the Applicant. / *Substitute Disclosure Statement Form (PPO 1449) Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

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FORM 1449

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Application Number MA9658P

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Fraser et al.

Filing Date

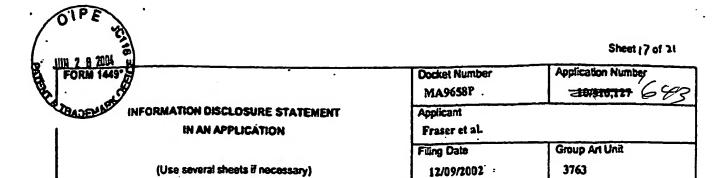
Group Art Unit

12/09/2002

3763

		OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)
B	,0	Chen, Xiaoō et al., "Differentiation-dependent expression of obese (ob) gene by preadipocytes and adipocytes in primary cultures of porcine stromal-vascular cells," Biochimica et Biophysica Acta, 1997, 1359:136-42 (Exhibit 158)
		Chimal-Monroy, Jesús and Lino Diaz de León, "Expression of N-cadherin, N-CAM, fibronectin tenascin is stimulated by TGF-β1, β2, β3 and β5 during the formation of precartilage condensations," The International Journal of Developmental Biology, 1999, 43:59-67 (Exhibit 159)
		Deng, Weiwen et al., "In Vitro Differentiation of Human Marrow Stromal Cells into Early Progenitors of Neural Cells by Conditions That Increase Intracellular Cyclic AMP," Biochemical and Biophysical Research Communications, 2001, 282:148-52 (Exhibit 160)
		Dennis, James E. et al., "A Quadripotential Mesenchymal Progenitor Cell Isolated from the Marrow of an Adult Mouse," Journal of Bone and Mineral Research, 1999, 14:700-9 (Exhibit 161)
		Dias, Peter et al., "The Motecular Basis of Skeletal Muscle Differentiation," Seminars in Diagnostic Pathology, 1994, 11:3-14 (Exhibit 182)
		Diefenderfer, David L. and Carl T. Brighton, "Microvascular Pericytes Express Aggrecan Message Which is Regulated by BMP-2," Biochemical and Biophysical Research Communications, 2000, 269:172-8 (Exhibit 163)
\exists		Eisenberg, Shlomo, "High density lipoprotein metabolism," Journal of Lipid Research, 1984, 25:1017-58 (Exhibit 164)
		Fajas, Lluis, et al., "Transcriptional control of adipogenesis," Current Opinion in Cell Biology, 1998, 10:165-73 (Exhibit 165)
		Farndale, Richard W. et al., "Improved quantitation and discrimination of sulphated glycosaminoglycans by use of dimethylene blue," Biochimica et Biophysica Acta, 1986, 883:173-7 (Exhibit 166)
		Fülöp, Csaba et al., "Expression of Alternatively Spliced Epidermal Growth Factor-like Domains in Aggrecans of Different Species," The Journal of Biological Chemistry, 1993, 268:17377-83 (Exhibit 187)
	·	Glowacki, J., "Influence of Age on Human Marrow," Calcified Tissue International, 1995, 56(Supp. 1):S50-1 (Exhibit 168)
		Grigoriadis, Agamemnon E. et al., "Analysis of chondroprogenitor frequency and cartilage differentiation in a novel family of clonal chondrogenic rat cell lines," Differentiation, 1996, 60:299-307 (Exhibit 169)
I		Hardingham, Tim et al., "Studies on the Synthesis, Secretion and Assembly of Proteoglycan Aggregates by Chondrocytes," Matrices and Cell Differentiation, 1984, 151:17-29 (Exhibit 170)
		Haynesworth, S. E. et al., "Cell Surface Antigen on Human Marrow-Derived Mesenchymal Cells are Detected by Monoclonal Antibodies," <i>Bone</i> , 1992, 13:59-80 (Exhibit 171)
T		Huss, Ralf, "Isolation of Primary and Immortalized CO34" Hématopoletic and Mesenchymal Stem Cells from Various Sources," Stem Cells, 2000, 18:1-9 (Exhibit 172)
T	,	wasaki, Motoki et al., "Regulation of Proliferation and Osteochondrogenic Differentiation of Periosteum- Derived Cells by Transforming Growth Factor-β and Basic Fibroblast Growth Factor," Journal of Bone and Joint Surgery, 1995, 77A:543-54 (Exhibit 173)
		Katz, Adam J. et al., "Emerging Approaches to the Tissue Engineering of Fat." Clinics in Plastic Surgery, 1999, 26:587-603 (Exhibit 174)

EXAMINER				DATE CONSIDERED	12//	<i>///</i>	
EXAMINER: Init	ial it reference to	nsidered, wheth	er or not citation is	in conformance with MP	EP 609;/draw lin	e through citation is	not in
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ľ	, ,	OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)
1/2	4	Kirsch, Thorsten and Klaus von der Mark, "Remodelling of collagen types I, II and X and calcification of human fetal cartilage," Bone and Mineral, 1992, 18:107-17 (Exhibit 175)
1	·	Kosher, Robert A. and Michael Solursh, "Widespread Distribution of Type II Collagen during Embryonic Chick Development," Developmental Biology, 1989, 131:558-66 (Exhibit 176)
		Lazarus, Hillard M. et al., "Human Bone Marrow-Derived Mesenchymal (Stromal) Progenitor Cells (MPCs) Cannot Be Recovered from Peripheral Blood Progenitor Cell Collections," Journal of Hamatotherapy, 1997. 6:447-55 (Exhibit 177)
		Leboy, Phoebe S. et al., "Ascorbic Acid Induces Alkaline Phosphatase, Type X Collegen, and Calcium Deposition in Cultured Chick Chondrocytes," The Journal of Biological Chemistry, 1989, 264:17281-6 (Exhibit 178)
		Lee, Yun-Shain and Cheng-Ming Chuong, "Adhesion Molecules in Skeletogenesis: I. Transient Expression of Neural Cell Adhesion Molecules (NCAM) in Osteoblasts During Endochondral and Intramembranous Ossification," Journal of Bone and Mineral Research, 1992, 7:1435-46 (Exhibit 179)
·		Lennon, Donald P. et al., "Human and Animal Mesenchymal Progenitor Cells from Bone Marrow: Identification of Serum for Optimal Selection and Proliferation," In Vitro Cell. Dev. Biol Animal, 1996, 32:602-11 (Exhibit 180)
		Lev, Robert and S. S. Spicer, "Specific Staining of Sulphate Groups with Alcian Blue at Low pH," J. Histochem. Cytochem., 1964, 12:309-10 (Exhibit 181)
		Long, Michael W. et al., "Age-Related Phenotypic Alterations in Populations of Purified Human Bone Precursor Celts," The Journals of Gerontology, 1999, 54A:854-62 (Exhibit 182)
		Lucas, P. A. et al., "Isolation of Putative Mesenchymal Stem Cells from Rat Embryonic and Adult Skeletal Muscle," In Vitro Cell Dev. Biol., 1992, 28:154A (Exhibit 183)
1.		MacDougald, Ormond A. and M. Daniel Lane, "Transcriptional Regulation of Gene Expression During Adipocyte Differentiation," Annu. Rev. Biochem., 1995, 64:345-73 (Exhibit 184)
		Mullen, Richard J. et al., "NeuN, a neuronal specific nuclear protein in vertebrates," Devalopment, 1992, 116:201-11 (Exhibit 165)
		Nagle, R. B. et al., "Factor VII-Associated Antigen in Human Lymphatic Endothelium," Lymphology, 1987, 20:20-4 (Exhibit 188)
1		Nakahara, H. et al., "Bone and Cartilage Formation in Diffusion Chambers by Subcultured Cells Derived from the Perlosteum," Bone, 1990, 11:181-8 (Exhibit 187)
	,	Nakano, Hirotaka et al., "RT-PCR Suggests Human Skeletal Muscle Origin of Alveolar Soft-Part Sarcoma," Oncology, 2000, 58:319-23 (Exhibit 188)
		O'Driscoll, Shawn W., "Current Concepts Review: The Healing and Regeneration of Articular Cartilage," Journal of Bone and Joint Surgery, 1998, 80A:1795-812 (Exhibit 189)
		Olson, E. N. et al., "Know Your Neighbors: Three Phenotypes in Null Mutants of the Myogenic bHLH Gene MRF4," Cell, 1996, 85:1-4 (Exhibit 190)
(W	Pairault, Jacques and Howard Green, "A study of the adipose conversion of suspended 3T3 cells by using glycerophosphate dehydrogenase as differentiation marker," Proc. Natl. Acad. Sci. USA, 1979, 76:5138-42 (Exhibit 191)
	W	Park, S. R. et al., "Interconversion Potential of Clone Human Marrow Adipocytes In Vitro," Bone, 1999, 24:549-54/(Exhibit 192)

EXAMINER

DATE CONSIDERED

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; draw line through citation if not in conformance and not considered. Include capy of this form for next communication to the Applicant.

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Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

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| Sheat If of 21
| Docket Number | MA9658P | 1072145137 | C 43
| MA9658P | 10721

1	OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)						
135	Pettersson, Per et al., "Cells in Human Adipose Tissue Developing into Adipocytes," Acta Med Scand, 1984, 215:447-51 (Exhibit 193)						
- 1-7-	Piereti 1 up et at "CD34+/CD105+ cells are enriched in primitive circulating progenitors residing in the						
	G0 phase of the cell cycle and contain all bone marrow and cord blood CD34+/CD38 ^{look} precursors,* British Journal of Heematology, 2000, 108:610-20 (Exhibit 194)						
	Price, Paul A., "GLA-Containing Proteins of Bone," Connective Tissue Research, 1989, 21:51-60 (Exhibit 195)						
	Price, Paul A. and Sharon A. Baukol, "1,25-Dihydroxyvitamin D ₂ Increases Synthesis of the Vitamin K-dependent Bone Protein by Osteosarcoma Cells," The Journal of Biological Chemistry, 1980, 255:11660-3 (Exhibit 198)						
	Probst, M. et al., "Homologous bladder augmentation in dog with the bladder acellular matrix graft," BJU International, 2000, 85:362-71 (Exhibit 197)						
	Richardson, J. B. et al., "Repair of human articular cartilage after implantation of autologous chondrocytes." The Journal of Bone and Joint Surgery, 1999, 81:1064-8 (Exhibit 198)						
	Rickard, David J. et al., "Isolation and Characterization of Osteoblast Precursor Cells from Human Bone Manny " Journal of Bone and Mineral Research, 1996, 11:312-24 (Exhibit 199)						
	Samat, Harvey B. et al., "Neuronal nuclear antigen (NeuN): a marker of neuronal maturation in the early human fetal nervous system." Brain & Development, 1998, 20:88-94 (Exhibit 200)						
	Scott, Douglas M. et al., "Collagen Synthesis in Cultured Osteoblast-like Cells," Archives of Biochemistry and Biochemistry 1980, 201:384-91 (Exhibit 201)						
	Shalhoub, Victoria et al., "Downregulation of Cell Growth and Cell Cycle Regulated Genes during Chick Osteoblast Differentiation with the Reciprocal Expression of Histone Gene Variants," Biochemistry, 1989, 28:5318-22 (Exhibit 202)						
	Siffert, Robert S., 'The Role of Alkaline Phosphatase in Osteogenesis,' The Journal of Experimental Medicine, 1951, 93:415-26 (Exhibit 203)						
-	Syrjälä, M. et al., "A flow cytometric assay of CD34-postitive cell populations in the bone marrow," British Journal of Haematology, 1994, 88:679-84 (Exhibit 204)						
11.	Tacchetti, C. et al., "In Vitro Morphogenesis of Chick Embryo Hypertrophic Cartilage," The Journal of Cell Biology, 1987, 105:999-1006 (Exhibit 205)						
	Tontonoz, Peter et al., "mPPARy2: tissue-specific regulator of an adipocyte enhancer," Genes & Openhoment 1994, 8:1224-34 (Exhibit 206)						
	Trayhum, P. and Margaret Ashwell, "Control of white and brown adipose tissues by the autonomic genous system." The Proceedings of the Nutrition Society, 1987, 48:135-42 (Exhibit 207)						
	Vandenburgh, Herman H. and Patricia Karlisch, "Longitudinal Growth of Skeletal Myotubes in Vitro in a New Horizontal Mechanical Cell Stimulator," In Vitro Cellular & Developmental Biology, 1989, 25:607-16 (Exhibit 208)						
	Wakitani, Shigeyuki et al., "Mesenchymal Cell-Based Repair of Large, Full-Thickness Defects of Articular Cartiage," The Journal of Bone and Joint Surgery, 1994, 76A:579-92 (Exhibit 209)						
	Wakitani, Shigeyuki et al., "Myogenic Cells Derived from Rat Bone Marrow Mesenchymal Stem Cells Exposed to 5-Azacvtidine," Muscle & Nerve, 1995, 18:1417-26 (Exhibit 210)						
7/1	Weintraub, Harold et al. "Tissue-specific gene activation by MyoD: determination of specificity by cisacting repression elements," Genes & Development, 1994, 8:2203-11 (Exhibit 211)						
V							
EXAMINER	DATE CONSIDERED 2/2/2						
EXAMINER: Initial if rote	ence considered, whether or not citation is in conformance with MPEP 609; draw line through citation if not in						
	eldered. Include capy of this form for next communication to the Applicant. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE						

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FORM 1449-By	Oocket Number MA9658P	Application Number
INFORMATION DISCLOSURE STATEMENT IN AN APPLICATION	Applicant Fraser et al.	
(Use several sheets if necessary)	Fling Date 12/09/2002	Group Art Unit 3763

1		OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)
D.	Y	Yoo, Jung U. and Brian Johnstone, "The Role of Osteochondral Progenitor Cells in Fracture Repair," Clinical Orthopeodics and Related Research, 1998, 355S:S73-81 (Exhibit 212)
		Young, Henry E. et al., "Human Pturipotent and Progenitor Cells Display Cell Surface Cluster Differentiation Markers CD10, CD13, CD56, and MHC Class-I (4035)," Proc. Soc. Exp. Biol. Med., 1999, 221:63-71 (Exhibit 213)
	,	Zezulak, Kathleen M. and Howard Green, "Specificity of Gene Expression in Adipocytes," Molecular and Cellular Biology, 1985, 5:419-21 (Exhibit 214)
	/	Zohar, R. et al., "Analysis of intracellular esteopontin as a marker of esteoblastic cell differentiation and mesenchymal cell migration," European Journal of Oral Sciences, 1998, 106(Supp. 1):401-7 (Exhibit 215)
	/	Zuk, Patricia Z. et al., "Multilineage Cells from Human Adipose Tissue: Implication for Cell-Based Theraples," Tissue Engineering, 2001, 7:211-28 (Exhibit 216)
V		
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MINE	₹	DATE CONSIDERED
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INFORMATION DISCLOSURE STATEMENT
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Application Number
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Applicant
Fraser et al.

Filing Date

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12/09/2002: 3763

U.S. PATENT DOCUMENTS									
EXAMINER INITIAL	DOCUMENT NO.	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE			
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		FOREIGN	PATENT DOCUMEN	TS					
	DOCUMENT NO.	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION			
		·			•	YES NO			
	OTHE	R DOCUMENTS (Includ	ng Author, Title, Date,	Pertinent Page	s, Etc.)				
LBC	and So	y, et al., 1985, "The Effe reded Hydroxyapatite Gr	owth," Calc. Tiss. Int.	. 37:75. (Exhibi	1217)				
1	Fortier	r, Lisa, et al., 2000, "Isol chymai stem cells," Am.	ation and chondrocyti	c differentiation	of equine bone	marrow-derived			
	Huiba	erse, Barbara, et al., 199	8, "Effect of Age and	Sampling Site	on the Chondro-(Osteogenic Potential			
	of Rat	bit Marrow-derived Mes bit 219)	enchymal Progenitor	Cells," Journal	of Orthopaedic I	Research. 18:18-24.			
	Linser Patho	unayer, Thomas et al., 19 Limmunopathol, 7:14-19). (Exhibit 220)		_	•			
1./	Nakaj	Nakajima, L. et al., 1998, "Adipose tissue extracellar matrix: newly organized by adipocytes during differentiation," Differentiation 63:193-200. (Exhibit 221)							
1.17	Zvaif	Zvaifler, et al., 2000, "Mesenchymal precursor cells in the blood of normal individuals," Arthritis Res. 2:477-488. (Exhibit 222)							
7/	Bond	et al., 1999, "Human Sub OA (Exhibit 225)	cutaneouspreadipocy	tes Differentiate	into osteoblasts	," FASEB Journal			
$\overline{\mathbf{A}}$	Smith	Smith et al., 2000, "Mesenchymal Stem Cells Derived From Bone Marrow And Human Adipose Tissue Exhibit Multilineage Potential," Journal of Investigative Medicine, 95A. (Exhibit 226)							
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INFORMATION DISCLOSURE STATEMENT IN AN APPLICATION

Fraser et al. Filing Date

Application Number 15016,127 16

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Docket Number

Group Art Unit

(Use several sheets if necessary)

12/09/2002

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		U.Ş. PA	TENT DOCUMENTS						
EXAMINER INITIAL	DOCUMENT NO.	DATE NAME	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE			
B	5,854,292	December 29, 1998 (Exhibit 235)	Ailhaud et al.						
		FOREIGN	PATENT DOCUMEN	TS					
	DOCUMENT NO.	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION			
						YES	NO		
	WO 99/28444 (Exhibit 223)	June 10, 1999	PCT		·				
	WO 99/02654 (Exhibit 224)	January 21, 1999	PCT						
	WO 00/53795 (Exhibit 231)	September 14, 2000	PCT						
	WO 01/62901 A2 (Exhibit 232)	August 30, 2001	PCT		•		•		
. 1	WO 01/21767 (Exhibit 233)	March 29, 2001	PCT						
	WO 97/26326 (Exhibit 238)	July 24, 1997	PCT						
	OTHE	R DOCUMENTS (Includi							
	abdor	Stashower et al., 1999, "Stromal progenitor cells present within liposuction and reduction abdominoplasty fat for autologous transfer to aged skin," <i>Dermatologic Surgery</i> , 25:12:945-949. (Exhibit 227)							
	Moles	Strutt et al., 1996, "Growth and differentiation of human adipose stromal cells in culture," methods in Molecular Medicine: Human Cell Culture Protocls, 41-51. (Exhibit 228)							
	Tavas	Tavassoli et al., 1981, "The Nature of Fibroblasts Derived From Adipose Tissue In-Vitro," Clinical Research, 29:5:871A. (Exhibit 229)							
	Vanc	Van et al., 1978, "Complete Differentiation of Adipocyte Precursors," Cell Tisrue, 195:317-329. (Exhibit 230)							
	Soda,	et al., 1983, "Adipocyte	stem cell: A brief rev	iew," Int. J. of	Cell Cloning, 1:79)-84. (Exi	hibit 234)		
		Ailhaud, et al., 1983, "Hormonal requirements for growth and differentiation of OB17 preadipocyte cells in vitro," Diabete & Metabolisme, Vol. 9:125-133. (Exhibit 237)							
	Ailha	Ailhaud, et al., 1985, "Lipoprotiene lipase et differenciation adipocytaire," Reprod. Nutr. Develop., Vol. 25:153-158. (Enhibit 238)							
	Zuk, Patricia A. et al., "Human Adipose Tissue Is A Source Of Multipotent Stem Cells," Molecular								
1	Biology of the Cell, 2002, 13:4279-4295. (Exhibit 239) Gimble, Jeffery M. et al., "Adipose tissue-derived therapeutics," Expert Opin. Biol., 2003, 3(5)705-713 (Exhibit 240)								
	Safford, Kristine M. et al., "Neurogenic differentiation of murine and human adipose-derived stromal cells," Biochemical and Biophysical Research Communications, 2002, 371-379. (Exhibit 241)								
W		- 8-17			. , /		/		

EXAMINER: Initial it reference considered, specified or not citation is in conformance with MPEP 609; draw line through citation if not in conformance and not considered, tocked copy of this form for next communication to the Applicant.

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